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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,765	01/30/2004	Hartwig Schlesiger	CH-7992/WW-5620	7046
157 7590 01/08/2007 BAYER MATERIAL SCIENCE LLC 100 BAYER ROAD PITTSBURGH, PA 15205			EXAMINER NUTTER, NATHAN M	
			ART UNIT	PAPER NUMBER
			1711	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/08/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/768,765	<b>Applicant(s)</b> SCHLESIGER ET AL.	
	<b>Examiner</b> Nathan M. Nutter	<b>Art Unit</b> 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6 November 2006 has been entered.

### ***Response to Amendment***

In response to the amendment filed 6 November 2006, the following is placed in effect.

The provisional rejection of claims 1-3 and 5 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-14 of copending Application No. 09/785,905 (Schlesiger et al US 2001/0025101), is hereby expressly withdrawn. A timely-filed Terminal Disclaimer was presented to the Office.

The rejection of claims 1-3 and 5 under 35 U.S.C. 102(b) as anticipated by Böhme-Kovac et al (US 5,387,626), only, is withdrawn.

### ***Claim Interpretations***

The claims require the inclusion of "a cellulose ether" and "from 0.1 to 10% by weight of an additive selected from the group consisting of starch, starch ether, guar,

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guar ether and xanthan." Further, the claims recite the employment of "additive b) as an aqueous solution or as a powder," a moisture content for the cellulose ether "in the range of 25% to 75% by weight, based on the weight of moist cellulose ether," subsequently "optionally further adding water" in an unspecified amount, then "milling and drying" the blend. Since the claims are nebulous as to the specific addition of water, the moisture content of the "moist cellulose ether" cannot be deemed to be critical, but more a matter of choice or availability of constituents.

The instant claims are directed to a product-by-process. Determination of patentability in such claims is based on product itself even though these claims are limited and defined by process. Thus, the product of these claims is unpatentable if it is the same as or obvious from the product of prior art, even if product of the prior art was made by a different process. The process, it is pointed out, is drawn to conventional mixing, grinding and drying steps, known in the art, to produce the cellulose ether composition.

The components of the composition, per se, are well-known and conventional for use together. Note the references to Andres et al (US 4,464,202), t'Sas (US 4,939,192) and Li et al (US 2003/0105192), all show the conventionality of the constituents included together. In Andres et al (US 4,464,202), note the paragraph bridging column 3 to column 4, column 4 (lines 38-45), column 5 (lines 1-15) and column 6 (lines 19-35). In the patent to t'Sas (US 4,939,192), note column 1 (lines 55-64), the paragraph bridging column 1 to column 2 and column 4 (lines 17-24). In the reference to Li et al (US 2003/0105192), note paragraphs [0012], [0050], Table 5 at page 6 and paragraph

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[0065]. The references, each, show the contemplated constituents as conventional for this art.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-3 and 5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. As amended on 17 April 2006, the claims do not have support in the Specification, as originally filed with regard to the "comparative cellulose ether blend," as recited herein. The Specification does not allude to any such blend as to content or context.

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation in claim 1 at the antepenultimate and penultimate lines of "has a bulk density of more than 40 g/l greater than the bulk density of a comparative cellulose ether blend," is meaningless without qualifying or quantifying what would be deemed to

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be such "comparative cellulose ether blend" and what would be an acceptable bulk density for the so-called comparative blend.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as obvious over Böhme-Kovac et al (US 5,387,626).

The reference to Böhme-Kovac et al (US 5,387,626) teaches the manufacture of a cellulose ether composition that is identical in scope to that recited and claimed herein. Note the Abstract and column 3 (lines 37-53) wherein the cellulose ether is combined with "from 0 to 20% by weight of a starch ether," "from 1 to about 15% by weight polyacrylamide and other additives, if desired. The compositional limitation for the starch ether completely embraces that recited and claim at "from 0.1 to 10% by weight." The polyacrylamide, also, is totally embraced at "from 0.05 to 1% by weight." The reference teaches the use of methylcellulose and methylhydroxyethyl cellulose, as recited in instant claim 2, at the paragraph bridging column 3 to column 4 and Table 1. the polyacrylamide of claim 4 is taught at the paragraph bridging column 4 to column 5. The specific starch ethers, including the carboxymethylhydroxypropyl starch as recited

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in instant claim 5, is shown at column 7 (lines 6-56). The reference teaches the addition of granular components at column 8 (lines 20 et seq.) and the mixing thereof at column 9 (lines 3-9). Further, note the Examples and Table VIII and Table IX.

The instant claims are directed to a product-by-process. Determination of patentability in such claims is based on product itself even though these claims are limited and defined by process. Thus, the product of these claims is unpatentable if it is the same as or obvious from the product of prior art, even if product of the prior art was made by a different process. The process, it is pointed out, is drawn to conventional mixing, grinding and drying steps, known in the art, to produce the cellulose ether composition. Further, the choice of a resin with the specific viscosity of the added polyacrylamide would clearly be within the skill of a practitioner depending on end-use. It would be clear to an artisan what viscosities would be suitable. As regards the recitation of "a sodium acrylate content of less than 20% by weight," this recitation is irrelevant since the lower limit is zero, the presence thereof is not required. As such, the instant claims are rendered obvious by the teachings of the patent.

Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as obvious over Schlesiger et al (US 2001/0025101).

The reference teaches essentially what is recited and claimed herein. Note the Abstract and paragraphs [0017]-[0021] for the broad concept. Note paragraph [0023] for the production of a high bulk density product, paragraphs [0025]-[0027] for the cellulose ethers, paragraphs [0038]-[0040] for the process steps that comprise the mill drying

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concept recited and claimed herein. At paragraph [0054] the reference teaches the addition of starch ethers, including hydroxyalkyl starches, as recited in instant claim 5. the reference shows the inclusion of anionic resins at paragraph [0054]. A skilled artisan would know that polyacrylamide would be suitable. As regards the recitation of "a sodium acrylate content of less than 20% by weight," this recitation is irrelevant since the lower limit is zero, the presence thereof is not required.

Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as obvious over Kieseewetter et al (US 6,943,247).

The reference to Kieseewetter et al (US 6,943,247) teaches the production of a cellulose ether blend composition comprising cellulose ethers, including methylhydroxyethyl cellulose, ethylhydroxyethyl cellulose (alkylhydroxyalkyl cellulose) and methyl cellulose of claim 2. Note column 4 (line 41) to column 5 (line18). At column 5 (lines 30-39) the reference teaches that "blends of cellulose ethers with starch ethers and/or guar ethers may be used, including hydroxypropylstarch (hydroxyl alkyl starch) as recited in claim 5. The Table at column 6, with 0.001-5 wt % cellulose ether to 0-0.5 wt % starch ether, which would be within the range recited for these components at lines 2-5 of claim 1. The reference teaches the addition of polyacrylamide and other additives at the paragraph bridging column 5 to column 6. The reference teaches the method steps of taking a cellulose ether, to which may be added the other constituents, with subsequent milling and drying. The broad claim 1, requires only the mixing of a) and b), milling and drying. This is taught in the Abstract, column 2 (lines 27-36) and the Examples section of the patent which commences at column 6 (lines 55 et seq.). While



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the recitation of the moisture content of the cellulose ether "in the range of 25% to 75% appears to be dependent upon the addition of "an aqueous solution" of polyacrylamide, the reference shows such a range at column 7 (lines 9-30).

The recitations of the claims are met by the teachings of the patent to Kieseewetter et al (US 6,943,247) as regards the constituents, their inclusion and the process of producing the composition. The reference is silent with respect to the specific bulk density. A skilled artisan would have a great expectation to achieve the same results since identical constituents are employed in an identical process and would thusly, be considered to be a feature manipulable within the teachings of the reference. This feature is not clearly defined with reference to any specific range or inclusion. As regards the recitation of "a sodium acrylate content of less than 20% by weight," this recitation is irrelevant since the lower limit is zero, the presence thereof is not required. As such, the instant claims are deemed to be obvious by the teachings of the patent to Kieseewetter et al (US 6,943,247).

Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Böhme-Kovac et al (US 5,387,626) taken in view of Girg et al (US 2004/0106729), Girg et al (US 5,432,215) or Weber et al (US 2005/0282939).

The reference to Böhme-Kovac et al (US 5,387,626) teaches the manufacture of a cellulose ether composition that is identical in scope to that recited and claimed herein. Note the Abstract and column 3 (lines 37-53) wherein the cellulose ether is combined with "from 0 to 20% by weight of a starch ether," "from 1 to about 15% by

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weight polyacrylamide and other additives, if desired. The compositional limitation for the starch ether completely embraces that recited and claim at "from 0.1 to 10% by weight." The polyacrylamide, also, is totally embraced at "from 0.05 to 1% by weight." The reference teaches the use of methylcellulose and methylhydroxyethyl cellulose, as recited in instant claim 2, at the paragraph bridging column 3 to column 4 and Table 1. the polyacrylamide of claim 4 is taught at the paragraph bridging column 4 to column 5. The specific starch ethers, including the carboxymethylhydroxypropyl starch as recited in instant claim 5, is shown at column 7 (lines 6-56). The reference teaches the addition of granular components at column 8 (lines 20 et seq.) and the mixing thereof at column 9 (lines 3-9). Further, note the Examples and Table VIII and Table IX.

The instant claims are directed to a product-by-process. Determination of patentability in such claims is based on product itself even though these claims are limited and defined by process. As regards the recitation of "a sodium acrylate content of less than 20% by weight," this recitation is irrelevant since the lower limit is zero, the presence thereof is not required. Thus, the product of these claims is unpatentable if it is the same as or obvious from the product of prior art, even if product of the prior art was made by a different process. The process, it is pointed out, is drawn to conventional mixing, grinding and drying steps, known in the art, to produce the cellulose ether composition.

The references to Girg et al (US 2004/0106729), Girg et al (US 5,432,215) and Weber et al (US 2005/0282939) all show the conventionality of the instant process, as it may be used to manufacture cellulose ether compositions, as herein claimed. In Girg et

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al (US 2004/0106729) note the Abstract, paragraphs [0010] for the cellulose ether, paragraph [0013] for the addition of polyacrylamide, than at paragraph [0014] may be in the form of a solution or suspension. Finally, note paragraph [0017] and the many Examples which teach the milling and drying process. The patent to Girg et al (US 5,432,215) shows the instant method using cellulose ether compositions at column 5 (lines 30-38) and the Examples. The reference to Weber et al (US 2005/0282939) teaches the method steps at paragraphs [0030]-[0033] and [0039]-[0043] for the manufacture of cellulose ether compositions, as recited and claimed. Further, note paragraphs [0023], [0025] and [0027] for concepts recited in the instant claims.

The reference to Böhme-Kovac et al (US 5,387,626) teaches the manufacture of a cellulose ether composition that is identical in scope to that recited and claimed herein. The secondary references to Girg et al (US 2004/0106729), Girg et al (US 5,432,215) and Weber et al (US 2005/0282939) show the conventionality of the method steps, as herein recited and claimed, for the manufacture of cellulose ether compositions. The reference to Böhme-Kovac et al (US 5,387,626) teaches the addition and mixing and the secondary references show the identical steps, as recited, applied to cellulose ether compositions. As such, the manufacture of the cellulose ether compositions of Böhme-Kovac et al (US 5,387,626) using the method steps of either secondary reference would have been a prima facie obvious modification to an artisan of ordinary skill in the art.

### ***Response to Arguments***

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With regard to the Declaration of Schlesiger filed 6 November 2006, the thrust of the Declaration is to comparing bulk density of a dry mix of powders with a bulk density of the powder having been wetted and then simultaneously dried and milled. The Declaration concludes the "co-processing (of) said compounds under simultaneously drying and milling, show a bulk density of greater than 250 g/l (see examples 9 and 10 in the present application)." Apparently declarant believes the examples 9 and 10 to be definitive. However, the Declaration shows dry mixing of powders yielding bulk density values between 183 and 204 g/l, and the instant Specification through its own manufacture shows bulk density values of 170 g/l for example 1, 191 g/l for example 5 and 174 g/l for example 8, which are within the range set out in the Declaration for the dry mix. The Declaration is not deemed to cure any deficiencies of application of the prior art since nothing conclusive as to bulk density values can be interpolated.

With regard to the rejection of claims 1-3 and 5 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, no amendment to the claims has been presented to delete the language that is the subject of the rejection.

With regard to the rejection of claims 1-5 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, no amendment to the claims has been presented to delete the language that is the subject of the rejection.

With regard to the reference to Böhme-Kovac et al, it is pointed out to applicant that the reference shows the use of an anionic polyacrylamide, as pointed out above. As

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regards the recitation of "a sodium acrylate content of less than 20% by weight," this recitation is irrelevant since the lower limit is zero, the presence thereof is not required. As regards the viscosity, again, this would be a matter of choice to a skilled artisan and fails to lend patentability to the claims. The recitation of "simultaneously milling and drying the cellulose ether blend" is not seen to lend patentability to the claims since the order of processing has not been shown to be critical. As pointed out above, the instant claims are drawn to a blend composition. The Declaration, as pointed out above, has not been shown to be determinative of patentability for the reasons expounded.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

With regard to the rejection of claims 1-3 and 5 under 35 U.S.C. 103(a) as obvious over Schlesiger et al (US 2001/0025101), applicants have not commented. It is pointed out that the reference clearly shows simultaneous drying and milling are already known and practiced on cellulose ether masses. Note paragraphs [0007] and [0009].

With regard to the rejection of the claims under 35 U.S.C. 103(a) as obvious over Kieseewetter et al (US 6,943,247), it is pointed out that the reference does, indeed, teach the inclusion of polyacrylamide at the paragraph bridging column 5 to column 6. This teaching is deemed to broadly include anionic and cationic polyacrylamides, as well, since it is stated in the generic. The rejection is made under 35 U.S.C. 103 and not under 35 U.S.C. 102. It is pointed out to applicants that this reference does, indeed, show simultaneous milling and drying for step (b). Note the Abstract, column 2 (lines 16-36) and the Examples. Applicants' contention otherwise is not well-founded. With regards to bulk density, again, applicants are referred to the comments above concerning the Declaration.

With regard to the rejection of the claims under 35 U.S.C. 103(a) as being unpatentable over Böhme-Kovac et al taken in view of Girg et al (US 2004/0106729), Girg et al (US 5,432,215) or Weber et al (US 2005/0282939), it is pointed out that the arguments regarding Böhme-Kovac et al are herein reiterated. As regards the recitation of "a sodium acrylate content of less than 20% by weight," this recitation is irrelevant since the lower limit is zero, the presence thereof is not required. As regards the viscosity, again, this would be a matter of choice to a skilled artisan and fails to lend patentability to the claims. With regard to the secondary references, applicants fail to argue. Further, with regard to the simultaneously mixing and drying, again, the instant claims do not define over the references relied upon. The Declaration is not conclusive to show what applicants purport since the Declaration shows bulk densities of the comparative dry mixing to be essentially the same as those of the claimed invention.

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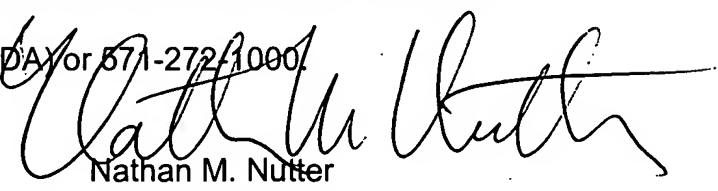
See above. Paragraph [0033] of Weber et al clearly teaches the "resulting mass...is dried and ground," and again at paragraph [0042] clearly "the resultant mass is ground and dried or first dried and then ground or subjected to mill drying (emphases added)." Nothing more is required to show this step as conventional. The rejection was made under 35 USC 103 and not under 35 USC 102.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Nathan M. Nutter  
Primary Examiner  
Art Unit 1711

nmn

2 January 2007